The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A substrate for attaching an array of biological or chemical analytes, said substrate comprises:

~~a)~~ ——a porous inorganic layer, derived from individual particles~~,~~;

~~b)~~ ——~~said~~ the porous inorganic layer having a plurality of interconnected voids of a predetermined mean size dispersed therethrough, and having void channels that extend through to an exposed surface of said porous inorganic layer;

~~c)~~ ——a glass interlayer which has a softening point that is lower than a softening point of the individual particles used to derive said porous inorganic layer; ~~and~~

~~d)~~ ——a flat, rigid, non-porous, inorganic understructure, wherein said glass interlayer is disposed between said porous inorganic layer and said flat, rigid, non-porous, inorganic understructure, the porous inorganic layer, the glass interlayer, and the flat, rigid, non-porous, inorganic understructure have matching coefficients-of-thermal expansion~~.~~; and

a uniform coating of a binding agent over at least a part of a surface area of the void channels and the exposed surface of the porous inorganic layer.

2. – 3. (Cancelled)

4. (Currently Amended) The substrate according to claim ~~2~~1, wherein said binding agent is gamma-aminopropylsilane or a cationic polymer.

5. – 8. (Cancelled)

9. (Previously Presented) The substrate according to claim 1, wherein said porous inorganic layer is a material that is transparent to light.

10. – 12. (Cancelled)

13. (Previously Presented) The substrate according to claim 1, wherein said porous inorganic layer has a thickness of about 5 μm.

14. (Previously Presented) The substrate according to claim 1, wherein said particles have a predetermined mean size in the range of about 3.5 μm.

15. (Cancelled)

16. (Previously Presented) The substrate according to claim 1, wherein said voids have a predetermined mean size in the range of about 0.3 μm to about 20 μm.

17. – 19. (Cancelled)

20. (Original) The substrate according to claim 1, wherein said porous inorganic layer is characterized as having a microstructure that produces a sensitivity of fluorescent molecules of at least one order of magnitude greater than that of a comparable, non-porous substrate.

21. (Original) The substrate according to claim 1, wherein said porous inorganic layer has a microstructure derived from at least a partial sintering of said individual particles.

22. - 37. (Cancelled)

38. (Currently Amended) A substrate for attaching an array of biological or chemical analytes, said substrate comprises:

~~a)~~ a flat, rigid, non-porous, inorganic understructure;

~~b)~~ a tape-casted porous inorganic layer, derived from individual particles, adhered to ~~said~~ the flat, rigid, non-porous, inorganic understructure~~;~~, ~~and~~the ~~c) said~~ tape-casted porous inorganic layer having a plurality of interconnected voids of a predetermined mean size dispersed therethrough, and having void channels that extend through to an exposed surface of ~~said~~ the tape-casted porous inorganic layer~~.~~; and

a uniform coating of a binding agent over at least a part of a surface area of the void channels and the exposed surface of the porous inorganic layer.

39. (Currently Amended) The substrate according to claim 38, further comprising a tape-casted glass interlayer disposed between ~~said~~ the tape-casted porous inorganic layer and ~~said~~ the flat, rigid, non-porous, inorganic understructure, the tape-casted porous inorganic layer, the tape-casted glass interlayer, and the flat, rigid, non-porous, inorganic understructure have matching coefficients-of-thermal expansion.

40. (New) The substrate of claim 38, wherein the binding agent is a cationic polymer or an aminopropyltriethoxysilane.